

Work Order ID 69454



Page 1

Wednesday, May 11, 2011 10:36:35 AM

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 5/11/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

R

Date: *11-05-11*

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp
Stamp

Draw Nbr

Revision Nbr

D3274

D

IIN-D206-642

Rev M

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

DP 11-5-20

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

BL 11/05/30

3- weld fwd cap as per dwg D3274 and QSI004

AR Aluminum Rod Batch:

M112360

BE 11/06/03

4- grind fwd cap weld on top surface only

BE 11/06/03

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.
Drill 3/16" pilot holes as per Dwg D3274

BB

11/06/14

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

114

QC5- Inspect part completeness to step on W/O

0.00



8 11/06/15

QC

Memo

0.00

Quality Control

116

QC10- Inspect visual per QSI004- ground welds

0.00



8 11/06/15

QC

Memo

0.00

Quality Control

120

Chemical Conversion Coat per QSI005 4.1

0.00



A.E. 11-06-17 (X)

HandFinish

Memo

0.00

Hand Finishing

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



QC3- Inspect Part Finish

0.00

QC

Memo

0.00

Quality Control

11-7-4

150



Skidtubes

0.00

Skidtubes

Memo

0.00

Skidtubes

1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274

2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R ☐ Sikaflex-291 ☒ 116945 ☐Sikaflex expire date: ☐ 12/01/15 ☐Start: ☐ 11/07/04 ☐ Time: ☐ 1:00 PMFinish: ☐ 11-7-7 ☐ Time: ☐ 11 AM

(Adhere for 12 hours)

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

170



Skid tubes

Skid tubes

Skid tubes

Memo

0.00

0.00

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2 OPEN HOLES TO .297" . Deburr

3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

DP

11-7-7

DP

11-7-7

BE 11/07/12

H.I.F.O.H.

W/O:		WORK ORDER CHANGES					
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Cust Item ID:

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

4.7°
h=3.0"

0.00

Subst 12

Quality Control

190

Skidtubes

0.00



Skidtubes

Memo

0.00

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod
A/R ☐ Aluminum Rod ☐ M112860 BG 11/07/14

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr. BE 11/07/14

W/O:		WORK ORDER CHANGES					
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Cust Item ID:

Required Date: 6/6/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

S u l o s l e

210

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

S u l o s l e

(H)

220

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

1 0 M u l o s l e 20

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

230

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME: 7:30

OVEN TEMPERATURE: 300

FINISH TIME: 8:00

1 of 152 11-7-21.

240

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 of 14 11/07/22

250

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.

✓ A/R ☐ N/A ☐ LPS-3 ☐ 11 109956

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a

✓ A/R ☐ ☐ Sikaflex-291 ☐ 11 117516

Sikaflex expire date: ☐ 15/01

1 of 14 11/07/22

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

260



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Inspect Nut Plate & Inserts

W 11 07 22 (1)

270



HandFinish

Hand Finishing

HAND FINISHING RESOURCE #1

0.00

Memo

0.00

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

A/R ☐ Sikaflex-291 ☐ 11/7516 ☐

Sikaflex expire date: 01-15

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3 Batch: _____

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R ☐ Sikaflex-291 ☐ 11/7516 ☐

Sikaflex expire date: 01/15

1 BR 11-7-25.

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280



QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Quality Control

M 11 01 25 ①

290



Packaging

Identify as per dwg & Stock Location: _____

0.00

Memo

0.00

Packaging

PMP 69446 11/7/26 ①

300



QC

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

Quality Control

11/7/26 ①

11-07-26 ①

W/O:		WORK ORDER CHANGES					
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Picklist Print

Wednesday, May 11, 2011 10:36:42 AM

Page 1

Work Order ID: 69454

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube




Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:B 05.09.23 Revised per D206-642 Rev. J KJ/JLM
 IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
 IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
 IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
 IPP Rev:F 08-06-02 add comment DD verified by:EC
 IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190  Extrusion Round 3" 206		Manufactured	No			110	Each	34.4000	1	1			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				HALL				34.4					
				59874				34.4					
D3285-1  Cap		Manufactured	No			110	Each	110.0000	1	1			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG002				110					
				52511				63					
				52647				47					
D3282-041  Float Web (206L/407)		Manufactured	No			150	Each	9.0000	1	1			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG				9					
				65293				2					
				66363				7					

① DP 11-5-26

BE 4/06/03

/

Sh

H 1/07/08

1

W/O:		WORK ORDER CHANGES					
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Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

190

Each

199.0000

12

12



Cross Bolt Spacer



BE 11/07/14

271355 x 12

Location

Loc Qty

Loc Code

LG

85

68224

85

LG001

114

65317

1

68507

113

D3275-1

Manufactured No

190

Each

262.0000

12

12



Crossbolt Spacer



BE 11/07/14

Location

Loc Qty

Loc Code

LG

71

67767

71

LG002

191

66109

11

66930

108

68946

72

CR3212-4-03

Purchased No

250

Each

1,254.000

2

2



Cherry Rivet



4H 11/07/12

Location

Loc Qty

Loc Code

FP-B

16

110139

16

ST311

1238

114859

1238

x2

W/O:		WORK ORDER CHANGES					
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Start Date: 5/11/2011



Required Date: 6/6/2011

Start Qty: 1.00



Required Qty: 1.00

D3536-23	Manufactured	No	270	Each	23.0000	1	1
							<u>BR 11-7-05.</u>
Gasket							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP011 <i>69902</i>	23	
43406	1	
53468	1	
66560	21	

D3536-35	Manufactured	No	270	Each	17.0000	1	1
							<u>BR 11-7-05</u>
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP012 <i>69755</i>	17	
66237	5	
67599	12	

D3536-39	Manufactured	No	270	Each	17.0000	1	1
							<u>BR 11-7-05.</u>
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP015 <i>66241</i>	17	
63578	5	
66241	12	

D3535-15	Manufactured	No	270	Each	19.0000	1	1
							<u>BR 11-7-05</u>
Wearshoe							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP018	19	
66558 ✓	12	
68358	7	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, May 11, 2011 10:36:42 AM

Work Order ID: 69454

Parent Item: D206-642-541


Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011


Start Qty: 1.00

Required Qty: 1.00

D3535-35 Manufactured No 270 Each 21.0000 1 1

 Wearshoe


Location	Loc Qty	Loc Code
FP018 69756	21	
65926	3	
67598	8	
68348	10	

BR 11-7-25.

D3535-39 Manufactured No 270 Each 12.0000 1 1

 Wearshoe


Location	Loc Qty	Loc Code
FP018 64076 ✓	12	
	12	

BR 11-7-25.

D3535-23 Manufactured No 270 Each 31.0000 1 1

 Wearshoe

Location	Loc Qty	Loc Code
FP021	31	
66236	5	
67594 ✓	13	
68342 ✓	13	

BR 11-7-25.

D3537-3 Manufactured No 270 Each 13.0000 1 1

 Wearpad

Location	Loc Qty	Loc Code
FP017 70817	13	
35697	1	
66230	12	

BR 11-7-25.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, May 11, 2011 10:36:42 AM

Work Order ID: 69454

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

D3537-1 Manufactured No

270

Each

56.0000

9

9



Wearpad



BL 11-7-25.

Location

Loc Qty

Loc Code

FP017

70972

56

9

63313

2

66135

2

66804

48

66935

4

AN960C10L NAS1149C0332 ✓ Purchased No

270

Each

0.0000

80

80



washer



BL 11-7-25.

AN960C416 NAS1149C0463 Purchased No

270

Each

0.0000

1

1



washer



117435

(x1) 11-7-22

D3672-1 Manufactured No

270

Each

1,371.000

2

2



Phenolic Washer



BL 11-7-25.

Location

Loc Qty

Loc Code

FP-A

21

52505

21

ST074

1350

64177 ✓

850

66821

500

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, May 11, 2011 10:36:43 AM

Work Order ID: 69454

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No 270 Each 1,662.000 80 80



BOLT



BL 11-7-25.

Location	Loc Qty	Loc Code
ST350	1662	
117094	964	
117313	698	

*35
45*

AN4C5A Purchased No 270 Each 532.0000 1 1



BOLT



SL u109122

Location	Loc Qty	Loc Code
FP-B	116	
112243	116	
ST345	416	
112243	416	

VL

D2646 Manufactured No 270 Each 42.0000 1 1



Aft Cap



BL 11-7-25.

Location	Loc Qty	Loc Code
FP006	41	
62678	41	
FP-4	1	
69019	1	

1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 8

Wednesday, May 11, 2011 10:36:43 AM

Work Order ID: 69454



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 5/11/2011

Required Date: 6/6/2011

Start Qty: 1.00

Required Qty: 1.00

D3413-1

Manufactured

No

270

Each

36.0000

1

1



HL 11/07/22

Ring

Location

Loc Qty

Loc Code

ST420

19

62961

8

66387

11

XL

ST473

17

65294

3

66945

14

Wednesday, May 11, 2011 10:36:43 AM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY	SCALE NTS
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

RELEASED
07.02.12
DEO ATTACHED

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 679454

11/05/11

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

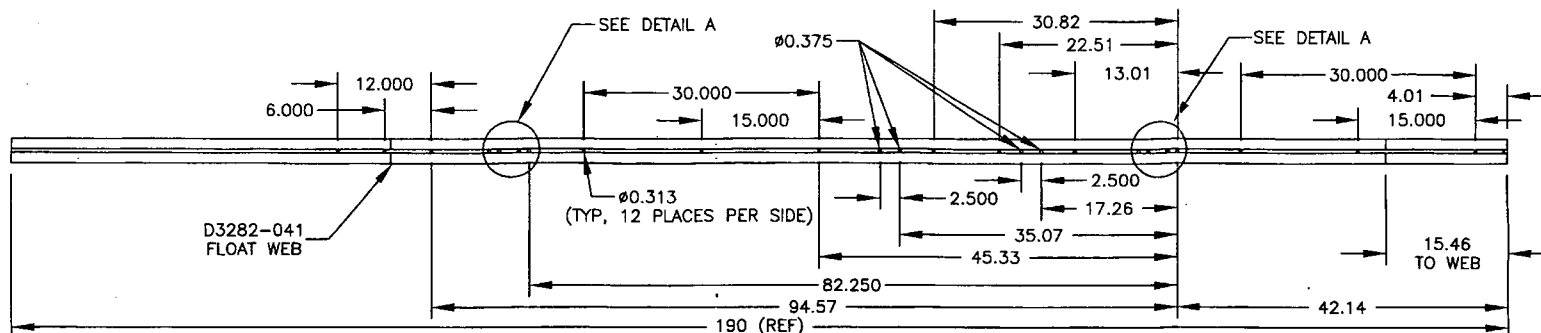
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

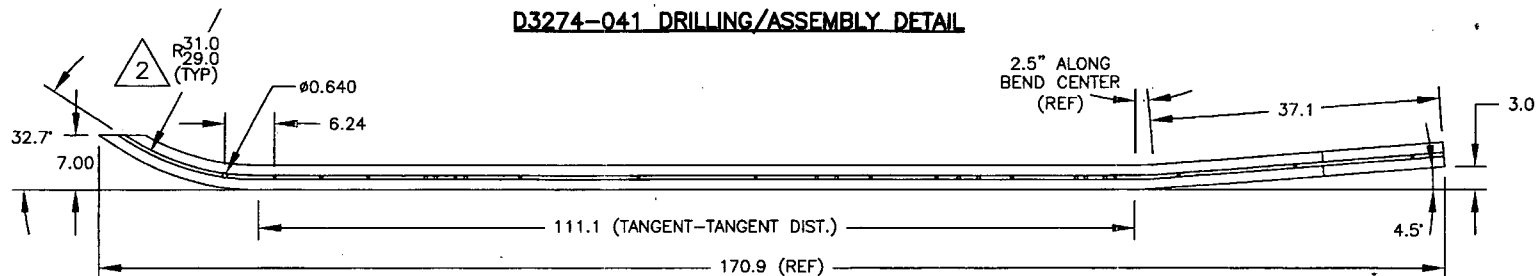
NOTE: Date & initial all entries

DEO ATTACHED

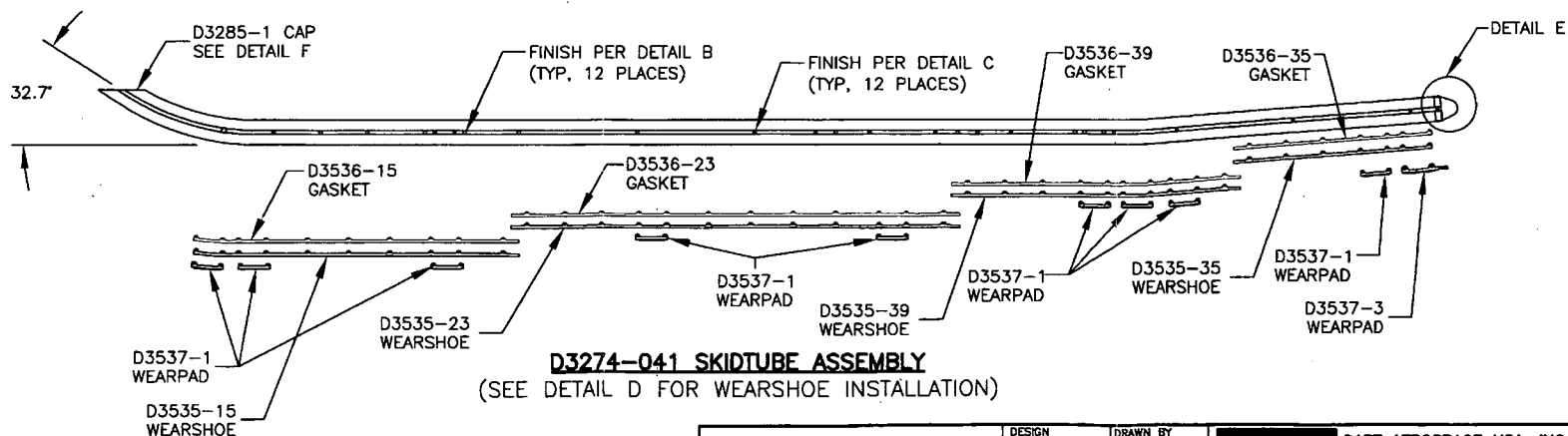
WLO 69454



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

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DESIGN	CP	DRAWN BY	PH	DART	DART AEROSPACE USA, INC.
CHECKED	#	APPROVED	#	DRAWING NO.	D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D	SHEET 2 OF 4
				SCALE	1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

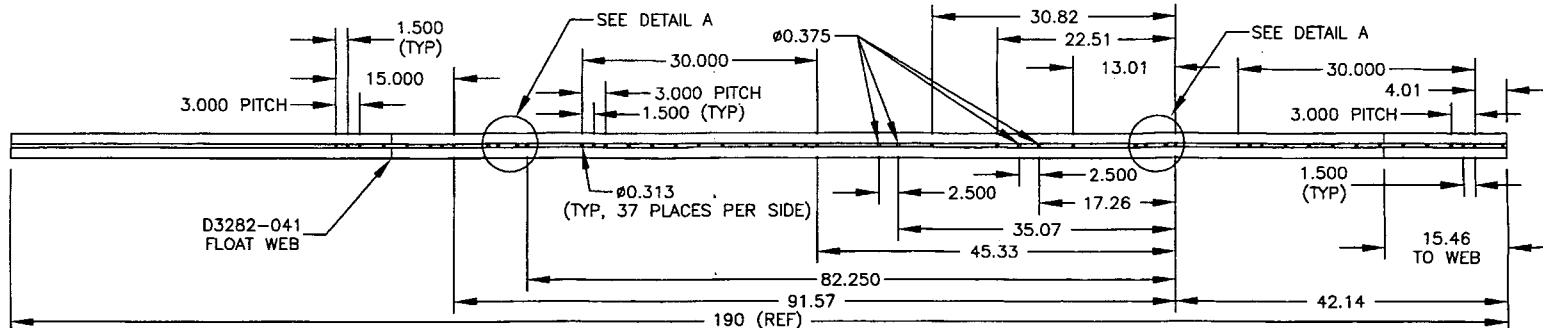
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

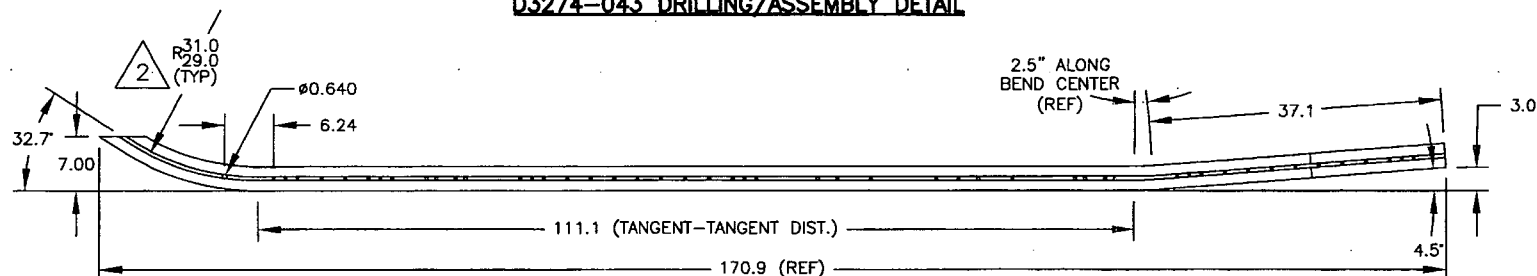
NOTE: Date & initial all entries

also 69454

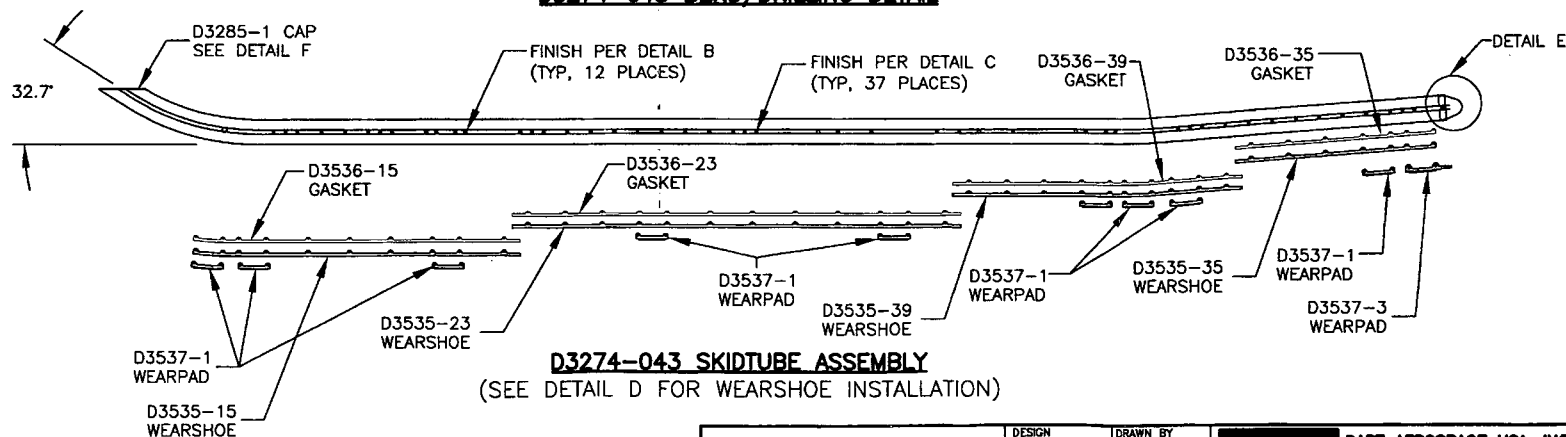
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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DESIGN	CP	DRAWN BY	PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED	H	APPROVED	H	REV. D
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	SHEET 3 OF 4
				SCALE 1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

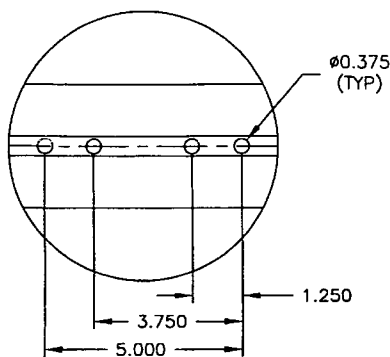
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

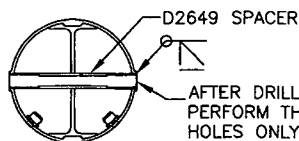
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DETAIL A: DRILL DETAIL

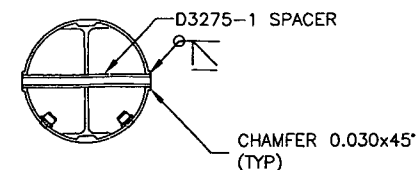


DETAIL B FOR $\phi 0.375$ HOLES ONLY

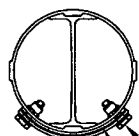


- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR $\phi 0.375$
HOLES ONLY:
1. CHAMFER HOLE $0.030 \times 45^\circ$
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE TO $\phi 0.313 \times 0.75$ DEEP

DETAIL C FOR $\phi 0.313$ HOLES ONLY



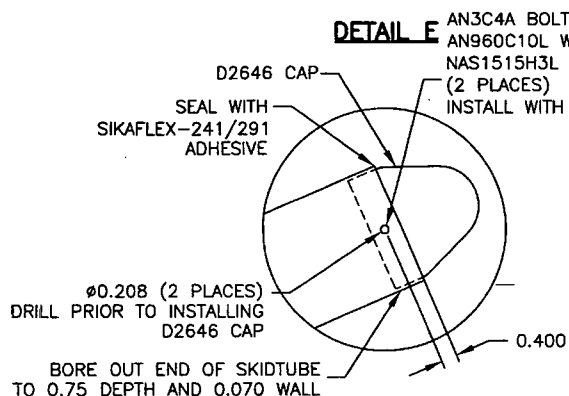
DETAIL D



- ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
AN960C10L WASHER (1)
(78 PLACES)

GASKET/WEARSHOE/WEARPAD (REF)

DETAIL E

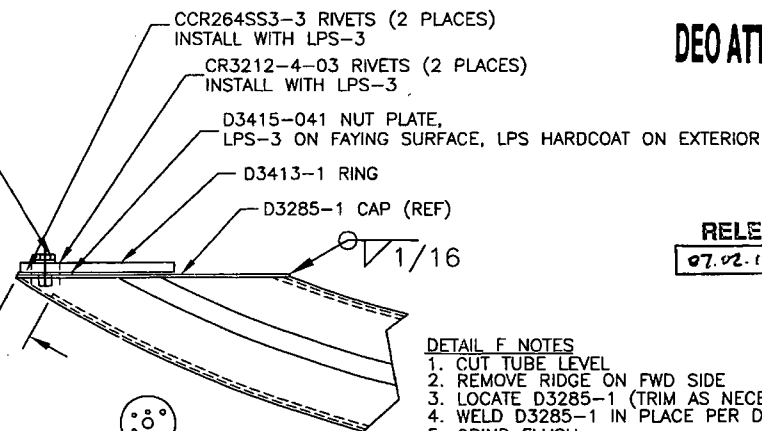


- AN4C5A BOLT (1)
AN960C416 WASHER (1)
INSTALL WITH SIKAFLEX-241/-291

1.0
REMOVE RIDGE
ON INSIDE OF
SKIDTUBE LEAVE
0.070 MIN.

ORIENTATION
OF D3415-041

DETAIL F: END FINISHING DETAIL



- DETAIL F NOTES**
1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

DEO ATTACHED

RELEASED
07.02.12

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	CP	PH		
	CHECKED	APPROVED	DRAWING NO.	SHEET 4 OF 4
	PH	PH	D3274	
DATE	TITLE		SCALE	
06.12.19	SKIDTUBE ASSEMBLY		1:3	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

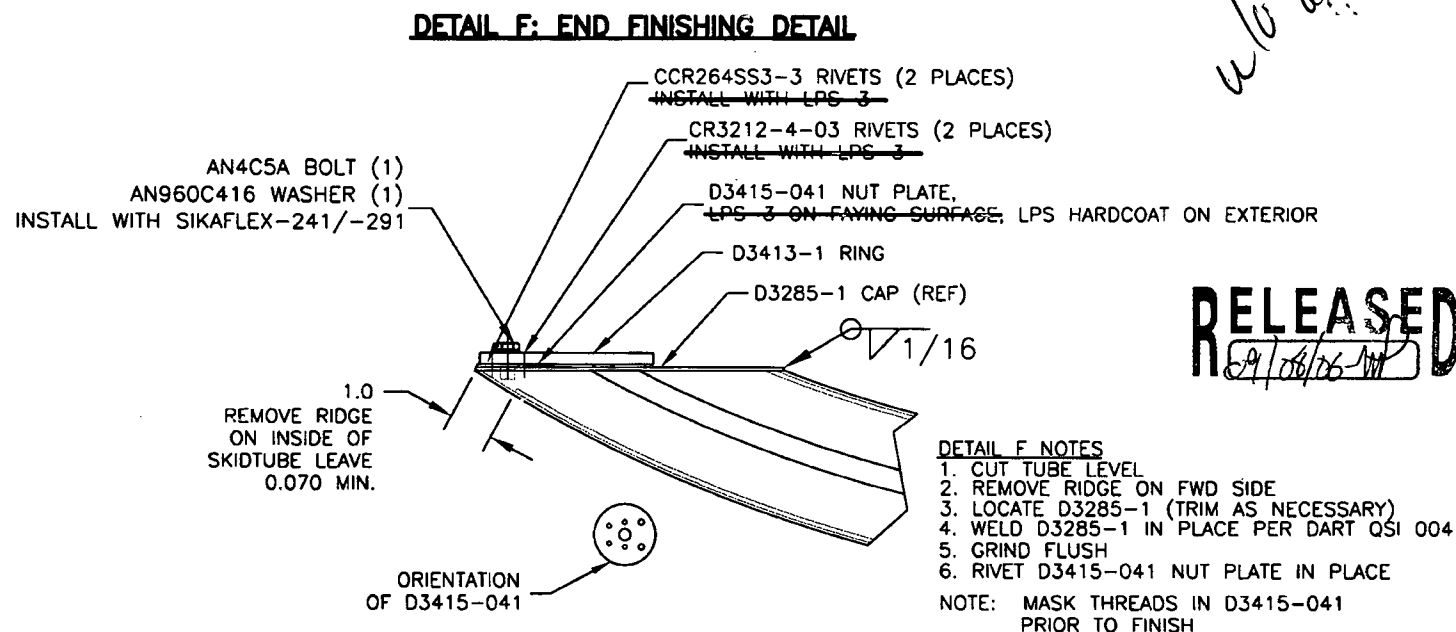
NOTE: Date & initial all entries

DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

255
NO. ~~255~~

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliot
Job number: 69953
Part number: 206 - 642 - 341
Description: 206
Welding Process: Tig ☒ Mig ☐
Base material: _____
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐
Undercut: pass ☒ fail ☐
Pin holes: pass ☒ fail ☐
Overlap (cold lap): pass ☒ fail ☐
Porosity (surface): pass ☒ fail ☐
Coloration: pass ☒ fail ☐

Qualifier Pat Cunn Date of Test Coupon 11.06.14
Welder Barclay Elliot Date of Test Coupon 11/06/14

The above named individual is qualified in accordance with AWS D17.1.2001 to weld